ALEXANDRE CARMINOT

Engineering Student - Software Engineering - Medical Engineering

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EDUCATION

Master - Medical Engineering
09/2019 - Present
EPF Engineering School Paris
Expected Graduation in 2025

· Problem-solving, analytical and critical thinking, medical engineering principles, programming, device design.

Computer Science - Exchange Program
09/2024 - Present
Tianjin University

· Algorithmic programming, machine learning , computer vision, applied data science

Intelligent Medical Engineering - Exchange Program
09/2023 - 01/2024
Tianjin University

· Precision medicine, neurosciences, brain-computer interfaces (BCI), medical imaging basics, fundamentals of medical engineering.

SPECIALIZATION COURSES

Deep Learning and Advanced Tensorflow
DeepLearning.AI

Advanced Machine Learning on Google Cloud
Google

Advanced Medical Neuroscience
Duke University

Machine Learning Specialization
Stanford University & DeepLearning.AI

PROJECTS

BCI application - In Progress
Developing a BCI simulator to interpret various EEG and MEG signals, including datasets for muscle movement, arithmetic tasks, error recognition, and active thinking. Enables real-time virtual control based on user thought patterns.

· Leveraging datasets (e.g., Berlin BCI Challenge IV, Motor-Movement Image) and signal processing techniques to classify thought-based actions for real-time control.

· Goal : Extract the "thoughts" and actions of the subjects to link it to various controls.

BCI Workshop - Tianjin University
Hand Movement Recognition (MATLAB)

· Developed and deployed a real-time hand gesture recognition system using flexion sensors and AI, classifying six unique static and dynamic patterns with pattern recognition algorithms. Demonstrated successful identification with 98% accuracy.

Disease Prediction Algorithm
Self-developed an AI to determine a disease based on a provided symptoms list. Currently predicts 41 common diseases using 131 distinct symptoms.

· Developed a disease prediction model that achieved 96% accuracy by combining an ensemble of XGBoost, SVM, and ReLu models. Benchmarked model performance against a deep neural network to ensure robustness and model reliability

EXPERIENCE

AI Model Review Specialist
01/2024 - Present
Outlier.AI | Remote | Current

· Reviews and flags critical errors in logic and generated code in large language model outputs, enhancing model precision and alignment with user expectations.

Private Tutor and Esports Coach
06/2022 - 09/2023

· Led personalized tutoring sessions in Math and Physics, strengthening foundational skills and boosting student confidence in subject mastery.

· Customized tutoring and coaching strategies to suit individual skill levels, resulting in an improvement of the student's performance.

Internship
06/2022 - 9/2022
Zen2050Maintenant
Paris

· Developed and implemented interactive exhibition stands for Zen2050's annual event, creating eco-conscious games, climate-themed art, and educational activities that engaged visitors in sustainability initiatives.

ABOUT ME

As a student of engineering and medicine, my journey is deeply rooted in the intersection of medicine and technology.
Focusing on medical engineering, I am driven by a passion for software development and artificial intelligence, particularly in the realms of brain-computer interfaces, machine learning, and neuro-engineering.
My work has spanned projects using Python, MATLAB, and C++ to explore data analysis, signal processing, and AI-driven solutions.

FIND ME ONLINE

Alex-Irae [link]

My Portfolio [link]

Alexandre CARMINOT [link]

SKILLS

Programming Skills

Machine Learning - Python

Tensorflow - Deep Learning - Keras

C++ - PyTorch - NLP -

Java - Docker - MATLAB

HTML, CSS & Javascript

Technical Skills

Neurosciences | Problem Solving

Innovation | Critical thinking

Device design | Analysis

LANGUAGES

French   Native, Voltaire Certification

English   Expert, TOEIC (980/990)

Spanish   Intermediate, B1

Chinese   Elementrary, HSK3

PASSIONS & HOBBIES

· Martial Arts : Taekwondo (Red Belt), Judo (Brown Belt)

· Team sports : Rugby & Soccer

· Music : Piano (Playing for seven years)

· Science : Astronomy, Cosmology, Archaeology